You know that the noise levels in your workplace are excessive. You’ve looked into the problem but realize that controlling noise at the source is not a practical solution. So you buy earplugs and hand them out to workers. Your job is done...right?

Wrong. Hearing-protection devices (HPDs) such as earplugs and earmuffs can be effective if used properly, but all too often they’re not. The selection, use, and care of hearing protection is not as easy as many people think. If it’s not done right, workers will be overexposed to noise and will eventually experience noise-induced hearing loss (NIHL).

Noise-induced hearing loss is one of the fastest-growing occupational diseases in Ontario. The biggest problem is that by the time workers realize they’re losing their hearing, it’s too late—the damage is permanent and irreversible.

Exposure to noise may sometimes be unavoidable, but hearing loss is 100 per cent preventable. Use the tips in this pull-out to help ensure that hearing protection devices are used properly at your workplace. On page four, you’ll find helpful illustrations that show you how to fit earplugs and earmuffs. Post this pull-out somewhere where workers can see it or present it as a safety talk.
Workers need to know when hearing protection is required.

Find answers to the following questions:
- How noisy is the workplace?
- Is it noisy all the time or only when certain tools or equipment are used?
- Which workers are exposed to noise? For how long?

Without knowing the answers, you might choose the wrong type of hearing protection, protect workers when they don’t need it, or worse, not protect workers when they need hearing protection.

Assess the noise level of the workplace to determine if or when hearing protection is required.

Assessing noise levels is not necessarily an expensive or highly technical task. As a general rule, if you can’t hear someone talking two feet away from you, and that person needs to shout to be heard, hearing protection is required. An inexpensive sound level meter or noise indicator can be used to identify hazardous sound levels caused by certain tasks. Manufacturer or industry data can help you find out how much noise is made by specific tools and equipment.

Post warning signs in noisy areas to alert workers that hearing protection is needed.

You don’t need to be exposed to loud noise all day long and every day to risk hearing loss. Exposure to very loud noise for even relatively short periods repeatedly and regularly over time can result in permanent hearing loss. In addition to posting signs, you can attach warning labels to loud tools or equipment.

Employers and workers need to choose the right kind of hearing protection.

To find the most effective type of hearing protection, you will need a thorough understanding of the noise characteristics of your workplace (i.e., when and where noise occurs, how long it lasts, etc.).

Choose an HPD that does not interfere with important communication.
Workers still need to hear important sounds such as alarms or other warning devices, approaching vehicles, etc. Modern HPDs can allow certain warning sounds through while blocking other hazardous noises. Reassure workers that wearing HPDs will not prevent them from hearing other important sounds.

Choose an HPD that feels comfortable.
A properly fitted (deeply inserted) earplug may feel uncomfortable at first. But after a few uses, workers should start to become used to it. Most suppliers offer a wide variety of HPDs, so involve workers in the selection process by letting them try on different types and styles before you buy them. Purchase at least three or four different models (two or three ear plugs and at least one earmuff).
Workers need to learn how to use hearing protection properly.

Hearing protection only works when it’s used correctly. Wearing HPDs that do not fit properly can give workers a false sense of security—they believe that they’re protected when they’re not.

Provide brief one-on-one training to workers on the proper use of HPDs.

Workplaces that provide audiometric testing (i.e., hearing tests) can use this opportunity to review the proper techniques for inserting, inspecting, and caring for HPDs with workers. Refer to the illustrations on the next page, or visit IHSA’s e-Learning web page to view online presentations on Basics of Hearing Protection and Basics of Noise. You can also download the “Hearing protection” chapter in IHSA’s Construction Health and Safety Manual (M029).

Always follow the manufacturer’s instructions for the proper use of HPDs.

Consult the manufacturer’s guide. Instructions can vary significantly depending on the manufacturer or the type of device (e.g., foam vs. pre-moulded earplugs).

Employers must enforce hearing protection at the workplace.

Once you have trained your workers in hearing protection and given them HPDs, you must make sure that they follow the correct procedures.

TIP seven
Make sure that workers wear hearing protection at all times, when required.

A hearing protector that is not used when needed is useless. For example, if an earplug is only used 80 per cent of the time that it should be used, it will provide only seven decibels of protection. Compare that to the 33 decibels of protection that the earplug provides if it’s used 100 per cent of the time it’s needed. (See table.)

Length of time worn (%) | Maximum protection (dB)
--- | ---
30 | 1.5
40 | 2.2
50 | 3
60 | 4
70 | 5
80 | 7
90 | 10
95 | 13
99 | 20
100 | 33

TIP eight
Give frequent safety talks to remind workers when hearing protection is needed.

Five-minute safety talks are a convenient and effective way to reinforce health and safety on the job. Refer to IHSA’s Safety Talks Manual (V005) for one on hearing protection.

Workers need to know how to inspect and maintain HPDs properly.

Just like any other type of personal protective equipment, HPDs do not last forever. To make sure they’re working properly, HPDs must be inspected and maintained.

Always consult the manufacturer’s instructions on proper inspection and maintenance procedures.

Inspection and maintenance procedures for HPDs can vary significantly depending on the type or manufacturer. For instance,

• earmuff cushions must be inspected for cracks and tears and must be replaced periodically, since the cushions can lose their flexibility
• foam earplugs should be replaced when they get dirty, but reusable earplugs can be washed with mild soap and warm water.

Hearing-protection devices are an important piece of personal protective equipment. If workers are not protected, loud noise can steal their hearing.
Fitting your earplugs and earmuffs

Before each use, inspect your earmuffs for damage and ensure that the muff pads have good elasticity.

Compress the muffs’ arms so that the muffs fit snugly against your head.

These earmuffs fit well. There’s a tight seal between the earmuffs and the head, all the way around the muffs.

These earmuffs don’t fit well. Notice that part of the ear is showing. That means the seal isn’t good. Adjust the muffs.

Earplugs and earmuffs won’t protect you if you don’t wear them properly

First, wash your hands. Then roll—don’t just squeeze—the earplugs between your thumb and two fingers.

Reach your other hand behind your head and pull your ear up. This straightens the ear canal so the plug can go in deeply.

Insert the plug deeply into the straightened ear canal.

If you insert the plug properly, you shouldn’t see very much of the plug outside the ear.

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